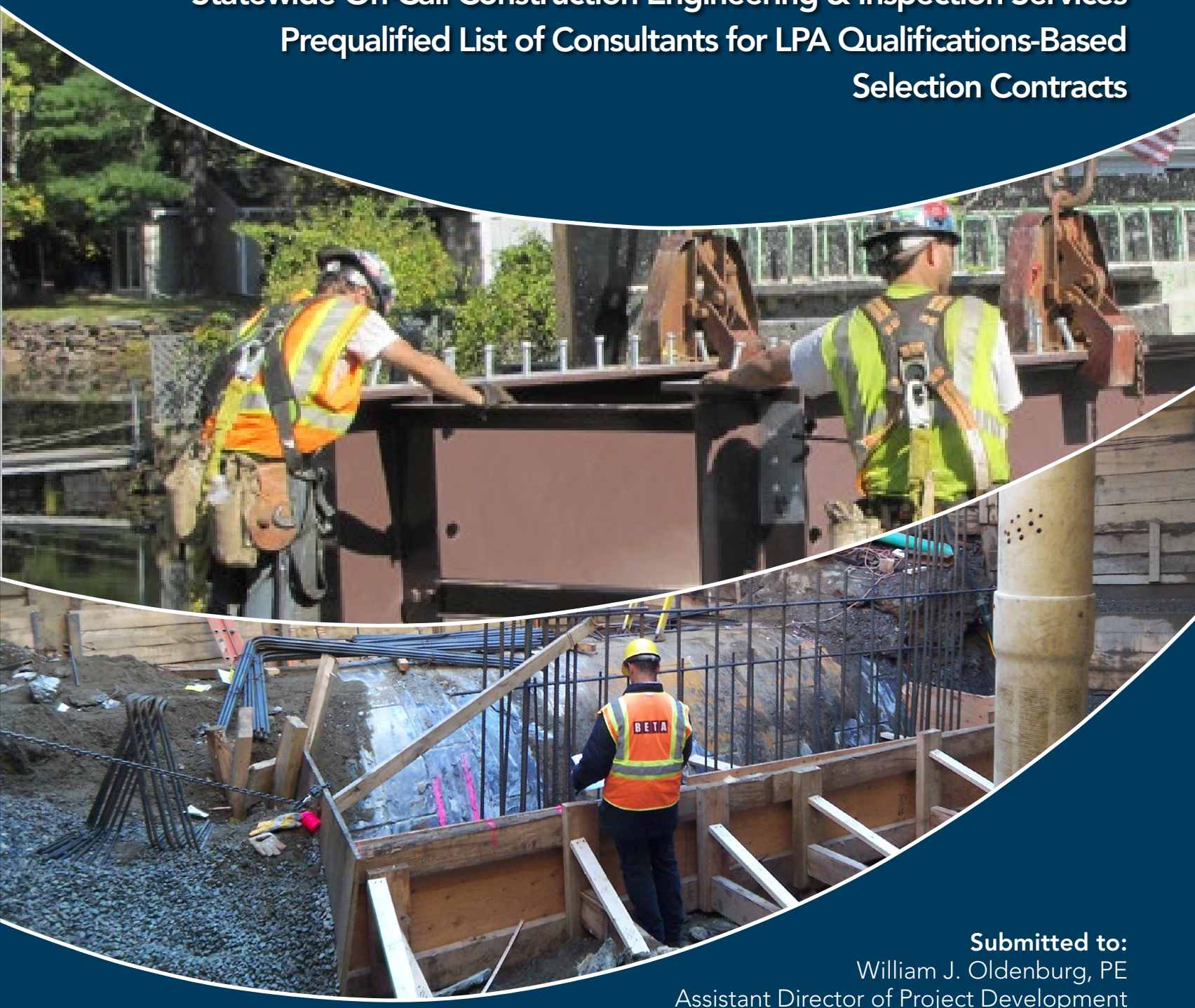
Response to Request for Proposals

Statewide On-Call Construction Engineering & Inspection Services Prequalified List of Consultants for LPA Qualifications-Based Selection Contracts



Submitted to:
William J. Oldenburg, PE
Assistant Director of Project Development
Chairperson, Consultant Selection Committee
William.Oldenburg@dot.nh.gov

Submitted by:
BETA Group, Inc.
889 Elm Street
Manchester, New Hampshire 03101
844.800.2382 x7148

BETA

December 30, 2022

TABLE OF CONTENTS

1 Cover Letter

2 Project Understanding & Approach
Project Understanding 2-1
Project Approach 2-1

3 Organizational Chart
Organizational Chart 3-1

4 Project Team
Company Overview 4-1
Our Team 4-1
Key Personnel 4-1
Project Team Matrix 4-2

5 References
References 5-1

6 Appendix
Resumes
Project Experience

IMPROVING COMMUNITIES TOGETHER

December 30, 2022

Mr. William J. Oldenburg, PE
Assistant Director of Project Development
Chairperson, Consultant Selection Committee
New Hampshire Department of Transportation

RE: Letter of Interest - Statewide On-Call Construction Engineering and Inspection Services
Prequalified List of Consultants for locally administered Local Public Agency (LPA) Qualifications-Based Selection Contracts

Dear Mr. Oldenburg,

BETA Group, Inc. (BETA) is pleased to submit our Letter of Interest for the Construction Engineering and Inspection Services Prequalified List for locally administered Local Public Agency projects. It is our understanding that this prequalified list may also be used for the short listing of consultants for State Aid Bridge (SAB) projects.

Improving Communities Together

At BETA, we believe the most successful projects are those developed in close collaboration with the community we are serving. As such, we work closely with municipal staff to understand their issues and understand their goals; and we work closely with the community at large through public engagement designed to gain input from and inform all of the project stakeholders of how the construction project will affect them. BETA has been providing construction engineering, construction inspection services, and roadway, bridge, traffic, and permitting services to our municipal clients throughout New England for over 40 years. The development of transportation projects is a specialty of our Manchester, NH office and all LPA and SAB projects will be led out of this office.

Our Team

Our team will be led by our Project Manager/Construction Engineer of Record **John Byatt, PE**. John is LPA certified and has been overseeing the design and construction of bridge and transportation projects with New Hampshire municipalities for over 25 years. **Christopher Turgeon, PE** will also manage projects and will be the Lead Engineer Inspector. John and Chris will be supported by our many Engineer Inspectors including **Bruce Temple, PE and David Stuczynski**. We also offer several certified **Traffic Signal Inspectors** who ensure traffic signals are working properly. These skills of our signal inspectors, including **Jaklyn Centracchio, PE, PTOE, IMSA** and **Kien Ho, PE, PTOE, IMSA,** make BETA well-suited for any projects with traffic signals, particularly CMAQ projects. They will all also have the support of our 160 professional engineers, planners, scientists, and other professional resources.

We are confident the Department will find our extensive experience, expertise, depth of resources, and specialty consultant team members more than qualified to be on the list of LPA consultants. Please let me know if you have any questions or require any additional information.

BETA Group, Inc.

John Byatt, PE
Project Manager
Vice President
JByatt@BETA-Inc.com

Mark R. Gershman, PE
Principal-In-Charge
Senior Vice President/COO
MGershman@BETA-Inc.com

BETA GROUP, INC.
40 Stark Street, Manchester, NH 03101
P: 603.321.3207 | W: www.BETA-Inc.com

2 Project Understanding and Approach

BETA has been providing Construction Engineering and Inspection Services to municipalities throughout New England for over 40 years. We have provided these services for a wide variety of projects such as transportation and bridge projects, water and wastewater projects, and environmental mitigation projects.

Project Understanding

Projects receiving federal funding through NHDOT will need to follow the Local Public Agency (LPA) and the Office of Federal Compliance (OFC) guidelines and requirements. State Aid Bridge (SAB) projects follow a similar but less extensive process. BETA staff have the experience and knowledge to lead the municipality through this process. Our Project Managers/Construction Engineers of Record are LPA and OFC certified as are several of our Engineer Inspectors.

Record keeping is vitally important in managing a federally funded construction project. We understand the record keeping requirements of the LPA and OFC programs and we maintain the required on-site files to allow for a successful OFC field audit.

BETA staff are well versed in the NHDOT Standard Specifications for Road and Bridge Construction. All LPA projects and most SAB bridge projects are developed using this document which specifies material requirements, construction requirements and the basis of payment for all items.

Project Approach

Assigned construction projects administered through this RFP will be led out of our Manchester, NH office. For each project, BETA will furnish a Project Manager/Construction Engineer of Record (PM) and Lead Engineer Inspector (LEI) to provide a combination of onsite and office related construction administration, allocate project related resources, coordinate onsite testing and laboratory analysis, maintain budgetary controls and coordinate with our field staff throughout the duration of the Project.

In general, our PM and LEI will work together in providing the following project related services:

Review of the Contract Plans and Documents: The PM and LEI will review the Contract Documents including design plans, technical specifications, and Contract Agreement information. Developing a clear understanding of the documents is critical to being able to deliver a successful project. Our PMs and LEIs, in addition to their construction experience, have experience developing Contract Documents and have an inherent understanding of them.

Pre-construction Meeting: BETA will facilitate this meeting to discuss: roles and responsibilities, emergency contacts, coordination between the LEI and the contractor, utilities and ROW, environmental requirements, schedule, traffic control, the quality control program, and Federal Compliance requirements.

Schedules: We will review the CPM schedule, sequencing of the work, schedule of shop drawings, and related submissions as prepared by the contractor and consult with the municipality concerning their acceptability.

Traffic Control Plan: In addition to our construction staff, BETA can call upon our experienced in-house traffic design team to review the contractor or design engineer provided traffic control plan to ensure it will provide safety for the traveling public and the construction workers and will not add unnecessary delays to the traveling public. Safety is the highest priority at BETA.

Public Outreach: It is often important to alert the public to a construction project that will affect them. This could be a traveler who might be delayed commuting to work or an abutter who may be affected by construction noise. BETA will work with the Town to provide information for distribution in their preferred outlet. Measures that BETA has implemented successfully in the past include pre-construction public meetings, and the posting of construction updates to social media.

Meetings: We will schedule and administer bi-weekly progress meetings, and other job conferences with the municipality and the contractor, as necessary. BETA will prepare agendas for the meeting in coordination with the municipality and the Contractor and will lead the meetings. BETA will then prepare meeting minutes for distribution documenting summary of discussions, action items, and assignment of responsibility.

Resident Observation: The LEI and other inspectors assisting the LEI will perform "Close to Full Time" inspection of the work being performed by the contractor. We will provide consultation and advice on construction matters to the municipality including the progress and quality of the executed work by the contractor, and to determine if the work being conducted is in general accordance with the requirements of the individual Contract Documents. The LEI will perform the requirements of the Office of Federal Compliance including reviewing sign-in sheets, interviewing workers to determine their classifications, and maintaining required records.

Environmental Regulatory Observation: BETA will contract with Comprehensive Environmental, Inc. to provide on-site environmental observation as needed. This may include ensuring the contractor is adhering to the requirements of the Storm Water Pollution and Prevention Plan (SWPPP), ACOE requirements and NHDES permits such as Dredge and Fill, Alteration of Terrain or Shoreland.

Contract Administration: These tasks to be performed by the PM and LEI include:

- Review and certify monthly applications for payment as submitted by the contractor for work completed under the individual construction contracts.
- Review contractor extra work requests and claims. In coordination with the municipality and contractor, prepare the required documentation for construction related change orders.
- Review and approve or reject shop drawings, diagrams, illustrations, samples and schedules, results of tests and inspections, and other data which the contractor is required to submit to demonstrate conformance with the Contract Documents.
- Daily field reports will be developed and item quantities installed will be documented following LPA criteria.

Material Quality Assurance: BETA will organize and oversee the quality assurance program which will follow the "NHDOT Quality Assurance Program for Municipally Managed Federal Aid Projects". We also use this program for non-federal aid projects such as State Aid Bridge Projects. We will acquire the services of a local accredited materials testing firm on a project-by-project basis.

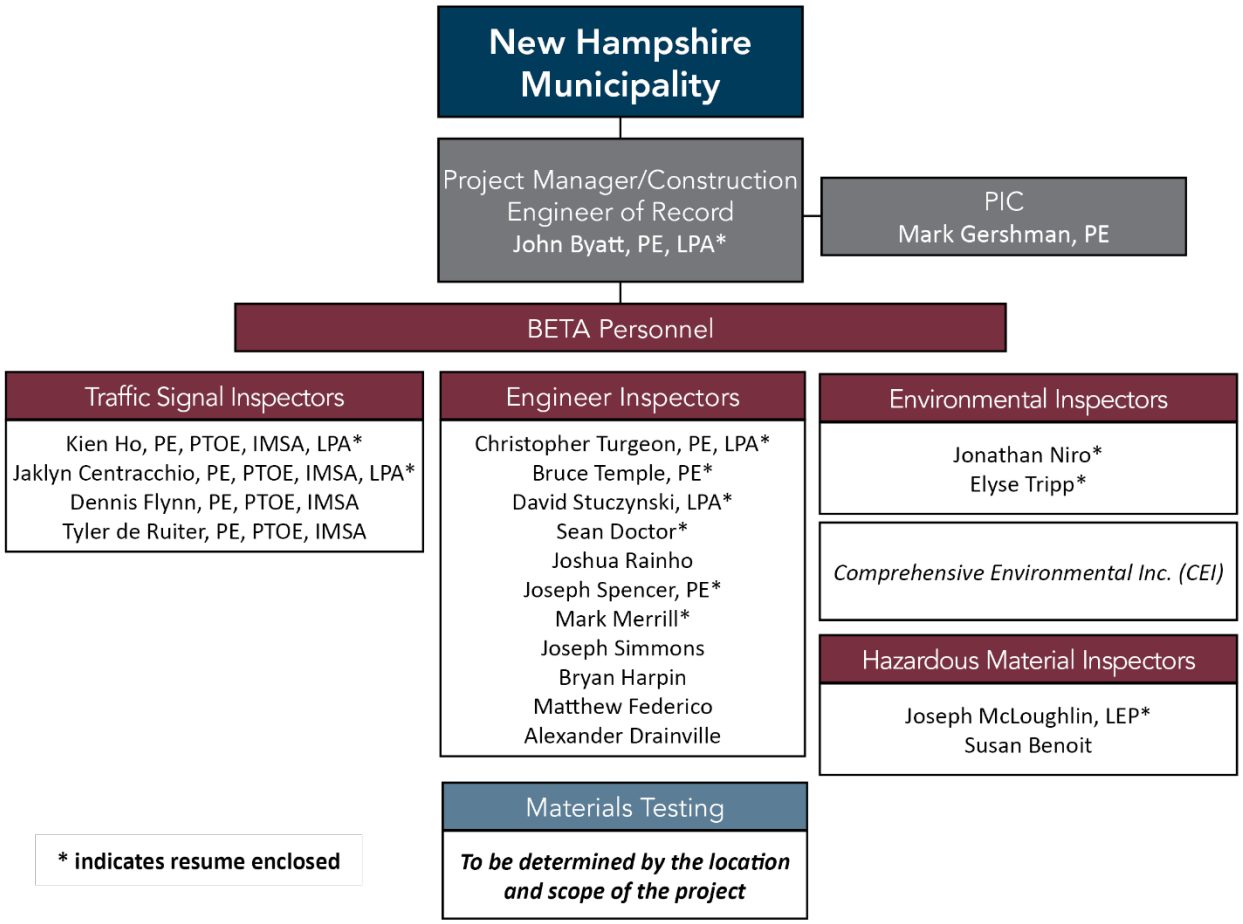
Solving Issues in the Field: Sometimes unforeseen conditions and issues can arise in the field. Our PM and LEI will work closely with the municipality and contractor to review the conditions and develop a mutually agreeable solution. If necessary, our BETA engineering design staff can assist with preparation of supplementary designs, sketches or quantity takeoffs as needed to facilitate field changes.

Substantial Completion and Final Inspections: After substantial completion has been reached, BETA will organize the final walkthrough with the contract, municipal staff, and DOT representatives. A punch list of uncompleted or unsatisfactory items is developed for the contractor to complete before Final Completion.

Project Close-Out: Final Completion is achieved when all outstanding items have been satisfactorily addressed and the project has been completed in accordance with the requirements of the contract. BETA will prepare close-out paperwork in conformance with LPA and Office of Federal Compliance requirements.

3 Organizational Chart

Organizational Chart



4 Project Team

Company Overview

For over 40 years, BETA has provided integrated solutions that improve the communities where we live and work. Our multi-disciplinary approach offers the ability to take projects from ideas to implementation under one roof. We have over 160 engineers, landscape architects, planners, construction managers, and support personnel. Ranked as a "Top 500 Design Firm" by *Engineering News Record*, BETA has a strong track record of working successfully with state DOTs and our municipal clients. Our technical services include traditional roadway/highway design, bridge/structure design, construction observation and administration, and traffic engineering services. Our clients include both municipalities as well as Departments of Transportation throughout New England.

Our Team

The multi-disciplined team put forth by BETA was developed to address the variety of potential projects that may arise from the LPA Program, State Aid Bridge (SAB), or any other projects receiving State and/or Federal funding. BETA has **five LPA certified** engineer inspectors and project managers. BETA also has specialized **traffic signal inspectors** who are on-site to ensure signal timing and performance is working properly and efficiently. In-field adjustments can be needed to ensure traffic delays are minimized and traffic is flowing as efficiently as possible. CMAQ and other projects that have signalized intersections will require these specialized and certified inspectors. We also have in-house environmental inspectors for **erosion control, stormwater management and hazardous materials oversight.**

BETA will also utilize the services of subconsultants for specific services. To supplement our in-house environmental inspectors, some environmental inspections will be performed by the **Comprehensive Environmental Inc. (CEI)**. Qualified material testing firms, experienced in the LPA Quality Control process, will be selected on case-by-case basis. Factors in selecting these subconsultants will include project location and area of expertise of the subconsultant in relation to the specific scope of the project. The combination of in-house staff and specialized subconsultants provides a team that can undertake any potential assignment.

Key Personnel

The BETA team will be led by **John Byatt, PE** who has over 30 years of bridge, transportation and construction experience, including over 25 years working with New Hampshire municipalities. He was the Construction Project Manager of the **Lebanon – Spencer Street Improvement Project** and has been the construction project manager on many municipal bridge projects over the last 25 years.

Christopher Turgeon, PE, LEED Green Associate, ENV SP and **Bruce Temple, PE** will be the lead Engineer Inspectors and Project Manager on some projects. Chris performed construction administration and observation duties on the **Lebanon – Spencer Street Improvement Project**.

Our Traffic Signal Inspection team will be led by **Jacklyn Centracchio, PE, PTOE, IMSA** and **Kien Ho, PE, PTOE, IMSA**. Kien is currently working on the the **Claremont – Washington Street Signal Project** and has over 37 years of experience in traffic analysis. They will be assisted when needed by **Dennis Flynn, PE, PTOE, IMSA** and **Tyler de Ruiter, PE, PTOE, IMSA.**

Our team will be assisted by many experienced and qualified Engineer Inspectors including **Joseph Simmons**, who is the manager of our Construction Services group and Senior Engineer Inspectors **Joseph Spencer**, and **Mark Merrill**.

In addition to the key individuals noted above, the following table depicts the engineering services to be provided and all of the individuals who will provide those services for potential projects.

Construction Engineering and Inspection Services in Support of LPA Projects		Years of Experience	Years with Firm	Project Management/CEOR	Tecnician Inspector - Level I	Tecnician Inspector - Level II	Tecnician Inspector - Level III	Engineer Inspector - Level I	Engineer Inspector - Level II	Engineer Inspector - Level III	IMSA Traffic Signal Inspector	Environmental Inspector	NH Licensed Professional Engineer	CPESC Certified	NETTCP Certified	LPA Certified
Key Personnel	Project Role															
BETA Group, Inc.																
John Byatt, PE, LPA	Project Manager/CEOR	30	2	x						x			x			x
Christopher Turgeon, PE, LPA	Engineer Inspector	13	13	x					x				x			x
Bruce Temple, PE	Engineer Inspector	2	40						x							
David Stuczynski	Engineer Inspector	4	4					x								x
Sean Doctor, EIT	Engineer Inspector	18	7						x							
Kien Ho, PE, PTOE, IMSA, LPA	Traffic Signal Inspector	37	19						x		x		x			x
Jaklyn Centracchio, PE, PTOE, IMSA, LPA	Traffic Signal Inspector	19	14						x		x		x			x
Dennis Flynn, PE, PTOE, IMSA	Traffic Signal Inspector	25	2						x		x					
Tyler de Ruiter, PE, PTOE, IMSA	Traffic Signal Inspector	13	11					x			x					
Joshua Rainho, PE	Engineer Inspector	10	6					x								
Joseph Simmons	Manager Construction Services	27	26						x							
Joseph Spencer, PE	Sr. Engineer Inspector	27	11						x							
Mark Merrill	Sr. Engineer Inspector	18	18						x							
Bryan Harpin	Sr. Engineer Inspector	23	14						x							
Matthew Federico	Engineer Inspector	5	5						x						x	
Alexander Drainville	Engineer Inspector	1	1					x								
Jonathan Niro	Environmental Inspector	7	3									x				
Elyse Tripp	Environmental Inspector	6	1									x				
Joseph McLoughlin, LEP	Hazardous Materials Inspector	31	19									x				
Susan Benoit	Hazardous Materials Inspector	36	3									x				
Subconsultant Support																
David Roman, PE	CEI - Environmental Inspector	11	3									x		x		
Pareena Deva, PE	CEI - Environmental Inspector	6	6									x				
Noah Parent	CEI - Environmental Inspector	3	1									x				

5 References

References

There is no better benchmark on the quality of services provided by our staff than feedback and testimonials from our clients. BETA is pleased to provide the following list of references for your consultation.

Brian A. Vincent, PE
City Engineer, DPW
City of Lebanon
193 Dartmouth College Hwy
Lebanon, NH 03766
603.448.3112 x1515

Donald D. Martino
Director of Public Works
Town of Bellingham
26 Blackstone Street
Bellingham, MA 02019
508.966.5813

Mark Elbag, PE
Director of Engineering
City of Worcester
20 East Worcester Street
Worcester, MA 01604
508.929.1300

Appendix

6 Appendix: Resumes

Education
MS, Civil Engineering – University of New Hampshire

BS, Civil Engineering – University of New Hampshire

Registrations/Certifications
Professional Engineer: NH, VT, ME, RI, MA

NH Local Public Agency Cert.

John Byatt, PE, LPA
Project Manager / Construction Engineer of Record

Mr. Byatt is a Vice President and Manager of BETA's Manchester, NH office. He possesses nearly 30 years of experience in project management, construction administration, and transportation and structural engineering within northern New England.

John is also a Bridge Engineer, where he is a project manager, construction administrator, senior engineer, and QA/QC manager. He has been the construction project manager and administrator for many New Hampshire Municipal bridge projects through his career.

Project Experience

- Spencer Street Roadway Improvements, Lebanon, NH
- Manchester Street over Pennichuck Reservoir, Merrimack-Nashua, NH
- Wiswall Road Bridges over Lamprey River, Durham, NH
- 2nd NH Turnpike over South Branch Piscataquog River, Francestown, NH
- Hands Across the Merrimack Pedestrian Bridge, Manchester, NH
- Pelham Road over Second Brook, Hudson, NH
- Old Cheshire Road Over Spring Brook, Unity, NH

Education
BS, Civil Engineering – University of New Hampshire (2010)

Registrations
Professional Engineer: NH, MA

NH Local Public Agency Cert.

Christopher Turgeon, PE, LPA
Project Manager / Construction Engineer of Record / Engineer Inspector

Mr. Turgeon is a Project Manager and Construction Engineering Inspector and Contract Administrator with over 13 years of experience. He has a wide variety of construction and highway engineering experience including: construction observation, contract administration, highway design, drainage calculations, and preparation of assorted environmental permit application.

Project Experience

- Spencer Street Roadway Improvements – Lebanon, NH
- Route 125 Roadway Improvements – Epping, NH
- Legacy Farms Street and Utility Development - Hopkinton MA
- Cooks Farm Street and Utility Development, Franklin MA
- WL French Site Development - Billerica MA
- Maple Hill Subdivision Street and Utilities, Franklin MA
- Lakeland Farms Street and Utility Development, Norfolk MA
- Acorn Place Street and Utility Development, Millis MA

Education
Master of Engineering,
University of Florida (1983)

Registrations
Professional Engineer: VT

Bruce Temple, PE
Senior Engineer Inspector

Mr. Temple is a Senior Construction Engineer Inspector with over 40 years of experience. He has a wide variety of construction and public works experience including as a contractor, engineer, and public works official.

Experience
- Spencer Street Roadway Improvements – Lebanon, NH
- Assistant Director of Public Works – Lebanon, NH
- Director of Public Works – Claremont, NH
- Morrill Construction
- Frank W. Whitcomb Construction

Education
BS, Civil/Environmental Engineering – University of Rhode Island (2002)

Registrations
Professional Engineer: NH, RI

NH Local Public Agency Cert.

International Municipal Signal Association (IMSA) Traffic Signal Inspector

Jaklyn Centracchio, PE, PTOE, IMSA, LPA
Traffic Signal Inspector

Ms. Centracchio has over 19 years of experience in traffic engineering including traffic signal inspection. She has developed a diverse background in many phases of transportation engineering. Her background includes traffic analysis, traffic calming, traffic design, and design for roadway. Jaklyn is proficient in VISSIM, HCS, SYNCHRO, AutoCAD, Petra, and Quest applications.

Project Experience
- Wire Road Intersection Improvements, Merrimack, NH
- Route 140 and Maple Street Intersection Improvements – Bellingham, MA
- Worcester Central Business District Streetscape Improvements – Worcester, MA
- Quincy Shore Drive and Sea Street Traffic Improvements – Quincy, MA
- Lake Street at Pulaski Boulevard Signalization – Bellingham, MA
- Adaptive Traffic Signal Project on Route 109 – Westwood, MA
- Route 140 and Route 106 Traffic and Safety Improvements – Mansfield, MA

Education
MSCE, Northeastern University
BSCE, Cleveland State Univ.

Kien Ho, PE, PTOE, LPA
Traffic Signal Inspector

Mr. Ho has over 37 years of experience specializing in all aspects of highway and transportation design and engineering including traffic signal inspection. Kien performs the designs for and manages various transportation projects, preforms QA/QC reviews, traffic management plans, and installation of Intelligent Transportation and other advanced signal systems.

Project Experience
- Route 140 and Maple Street Intersection Improvements – Bellingham, MA
- Traffic Control Operations Center & Advanced Traffic Signal System – Worcester, MA

Registrations
Professional Engineer: NH, MA

NH Local Public Agency Cert.

International Municipal Signal Association (IMSA) Traffic Signal Inspector

- Hancock Street Corridor Improvements, Quincy, MA
- Downtown Improvements – Framingham, MA
- Signal On-Call – Lexington, MA

Education
BS, Civil Engineering – University of Massachusetts - Lowell (2019)

David Stuczynski
Engineer Inspector

Mr. Stuczynski is an Engineer Inspector and Engineering Designer with over 3 years of experience. His experience includes on-site peer reviews of construction developments for several municipalities.

Experience

- The Home Depot Distribution Center Drainage and infiltration systems, Billerica, MA
- Trails at Legacy Farms: installing sewer main, drainage installation, and surface runoff control, Hopkinton, MA
- ADA Trail - Post construction review and data collection, Needham, MA
- Installing Water Main and Sewer Main Air Test observation at Glen Ellen, Millis, MA

Years of Experience
BETA: Since 2016
Total: Since 2005

Education
BS, Civil Engineering, University of Arizona (2005)

Sean Doctor
Engineer Inspector

Mr. Doctor has 17 years of experience involving roadway and drainage design, construction phasing, construction inspection, utility coordination, and cost estimation. In addition, he has experience in design of irrigation water systems, storm drain systems, sewer systems, and domestic waterlines. Sean is proficient in the use of AutoCAD, MicroStation, Land Development Desktop, InRoads, and more. Sean works out of BETA's Manchester, NH office.

Project Experience

- Cook's Farm; Union Meadows; Rolling Brook; South Hill Estates; 656 King Street, 0 Pond Street construction observation, Franklin, MA
- New England Ice Cream, 20 Commerce Way construction observation, Norton, MA
- Iron Horse construction observation, Billerica, MA
- Legacy Farms construction observation, Hopkinton, MA

Joseph Spencer, PE
Senior Engineer Inspector

Mr. Spencer has over 27 years of construction engineering and survey experience. Joe has been involved with utility and roadway infrastructure improvement projects in municipalities throughout New England. His experience includes a variety of design and construction projects where he has been responsible for resident inspections, field investigations, utility and topographic surveys and the calculation of construction quantities.

Years of Experience
Total: Since 1994

Education
BS, Civil Engineering – University of Massachusetts Lowell (1993)

Project Experience

- Route 140 and Maple Street Intersection Improvements – Bellingham, MA
- Boston Road (Route 3A) Traffic and Roadway Improvements – Billerica, MA
- High and Church Street Streetscape Improvements Project – Clinton, MA Water Street Promenade – Plymouth, MA
- Nantasket Ave Roadway Improvements Project – Hull, MA

Mark Merrill
Senior Engineer Inspector

Mr. Merrill is a Senior Engineer Inspector with 18 years of experience in providing onsite construction services and observation. His versatility and in-depth knowledge of roadway and utility related design and construction has benefitted BETA on various engineering projects. Mark is known for his practical approaches in resolving construction related problems, as well as his communication, coordination, and public relations skills.

Years of Experience
Total: Since 2003

Education
BS, Civil Engineering Technology – Wentworth Institute of Technology (2003)

Project Experience

- Union Avenue Utility Improvements – Framingham, MA
- Roadway and Sidewalk Rehabilitation Program – Framingham, MA
- Main Street Improvements – Easton, MA
- Dedham Square – Dedham, MA
- Tanyard Brook Culvert Replacement Project – Bristol, RI

Jonathan Niro
Environmental Inspector

Jonathan Niro is an Environmental Scientist in the environmental services group at BETA. Through applying varied experiences in wetland science, environmental regulation, land surveying, and stormwater management, Mr. Niro serves as a field-to-finish lead on several large-scale infrastructure and environmental projects. In addition, Mr. Niro's experience lends itself to providing expert peer review services for municipalities. Mr. Niro took the NHDES course on "Protecting Surface Water Quality on Construction Sites."

Years of Experience
BETA: Since 2020
Total: Since 2016

Education
BA, Geography/Environmental Studies – Framingham State University (2015)

Project Experience

- Environmental Monitoring/Construction Oversight, Millis, MA
- Washington St. Signal Optimization, Claremont, NH
- Valley Street Complete Streets Improvements, Manchester, NH
- Yarmouth Riverwalk Park, Yarmouth, MA
- Route 1 Reconstruction, Plainville, MA

Years of Experience
BETA: Since 2022
Total: Since 2017

Education
BA, Environmental Studies - Stonehill College (2017)

Elyse Tripp
Environmental Inspector

Ms. Tripp is a Staff Scientist for BETA with over five years of experience in the Environmental Sciences field. During this time, she has assisted communities as a wetland scientist performing ecological restorations, coastal shoreline cleanups, SWPPP inspections and removal of invasive species. Ms. Tripp took the NHDES course on "Protecting Surface Water Quality on Construction Sites."

Project Experience

- Environmental Construction Monitoring, MBTA Facility, Rochester, MA
- City Pier Floating Docks, City Pier, Fall River, MA
- Route 27 & West Street, Medfield, MA
- Peer Review – 13 Acton Road, Chelmsford, MA
- Nemasket River Ecological Restoration Limited Project, Middleborough-Lakeville, MA

Years of Experience
BETA: Since 2004
Total: Since 1992

Education
MS, Water Resources, Stanford University (1992)

BS, Civil Engineering, Worcester Polytechnic Institute (1991)

Joseph McLoughlin, LSP
Hazardous Materials

Mr. McLoughlin has 30 years of experience in the environmental consulting field providing a wide-range of environmental services to clients across New England. Mr. McLoughlin directs a diverse staff of scientists, engineers, and risk assessors conducting environmental assessments, site remediation, Brownfields assessments, soil management, regulatory compliance and indoor air quality assessments

Project Experience

- Brownfields investigations at petroleum and hazardous materials properties under an U.S. EPA Brownfields Assessment grant, Fall River, MA
- Investigation of soil and groundwater along an 800-foot corridor for the installation of a flood-control culvert for Cobb Brook, containing hazardous waste disposal sites, Taunton, MA
- Licensed Site Professional for several brownfields properties owned by the City of Taunton, Taunton, MA

Spencer Street Improvements

Lebanon, New Hampshire

REFERENCE

Brian Vincent, PE
City Engineer
Office of Public Works
193 Dartmouth College Highway
Lebanon, NH 03766
603.448.3112 x1515
brian.vincent@lebanonnh.gov

SERVICES PROVIDED

- Roadway and Intersection Design
- Streetscape Design
- Public Participation
- Utility Design
- Permit Coordination
- Construction Observation
- Construction Administration

PROJECT STATUS

Complete

The Spencer Street corridor in Lebanon, NH has traditionally served industrial and single-family homes directly abutting or accessed by the corridor. In recent years, the roadway has experienced significant growth with the construction of several commercial and multi-unit residential developments. Additionally, the City has accepted a proposal from a private entity for the redevelopment of the former DPW site on Spencer Street. These projects, coupled with the potential future development, have necessitated a significant upgrade to the Spencer Street corridor.

BETA was contracted by the City to provide services associated with the Preliminary and Final Design of the improvements. As part of the Preliminary design, BETA developed and evaluated several design alternatives to accommodate the multitude of users of the roadway. This required that the design utilize a “Complete Streets” approach when developing the improvements options. The option selected includes a complete roadway reconstruction, new drainage, new utility connections, sidewalks, and landscaping The project also included the reconfiguration of the Taylor/Spencer Street intersection. There was a stop condition westbound traffic on Spencer Street. As this is the predominant movement in the intersection, the proposed design re-aligned Taylor Street to form a “T” with Spencer Street.

BETA provided resident construction inspection and contract administration services for the project. Our team worked very closely with the contractor and the City to ensure the project was built in conformity to the plans and of the highest quality.

Route 140 & Maple Street Intersection Improvements

Bellingham, Massachusetts

REFERENCE

Donald DiMartino
Director of Public Works
Town of Bellingham
26 Blackstone Street
Bellingham, MA 02019
508.966.5813

SERVICES PROVIDED

- Coordination with MassDOT
- Traffic Analysis
- Roadway & Traffic Signal Design
- Stormwater Design
- Utility Coordination
- Right-of-Way Plans
- Bid & Construction Phase Assistance
- Resident Observation

PROJECT STATUS

Completed

PROJECT COST

Construction Cost $2.5M

PROJECT BENEFITS

- Improved Alignment
- Improved Roadway Infrastructure
- Stormwater Management
- Improved Traffic Circulation

The Town of Bellingham contracted BETA to improve traffic congestion, traffic operations, roadway conditions, and pedestrian safety at the intersection at Route 140 (Mechanic Street) and Maple Street, which links Bellingham to Interstate 495, the Franklin commuter rail station, and is close to both the downtown and an industrial zone.

This project included extensive coordination with MassDOT as Route 140 is considered an Urban Principal Arterial under MassDOT jurisdiction and is on the National Highway System. The project limits include 900 linear feet along Route 140 and 800 linear feet along Maple Street, of which 400 feet of the easterly section of Route 140 belongs to the town of Franklin.

BETA collected traffic data and crash history, conducted field surveys, and compiled Right-of-Way information. A Highway Access Permit was acquired from MassDOT. Roadway Design included improving intersection geometry, horizontal alignment, vertical curve adjustment to comply with the speed limit, and an upgrade to the entire drainage system. The project also included a new state of the art traffic signal system.

Final intersection plans incorporate the addition of:

- Right Turn Lane on the Route 140 Westbound approach to Maple Street;
- Right Turn lane on Maple Street Southbound approach to Route 140;
- Left Turn lane on Maple Street and South Maple Street; and
- Road widening on Route 140 to accommodate west bound-67 truck turning radius from the proposed left turn lane on Maple street onto Route 140.

BETA prepared probable construction cost estimates, bid documents, highway layout alteration plans, and provided construction phase services with Resident Representation. This project was funded by a combination of a MassWorks Grant and private mitigation funds and is an example of a successful private/ public partnership.

BETA

Traffic Control Operations Center & Advanced Traffic Signal System

Worcester, Massachusetts

REFERENCE
Mark Elbag, PE
Director of Engineering
20 East Worcester Street
Worcester, MA 01604
508.929.1300

PROJECT STATUS
Completed

PROJECT COST
Total Construction Cost $6.5M

PROJECT BENEFITS
- ✓ Advanced Traffic Management
- ✓ Remote Management of Traffic Conditions
- ✓ Monitoring of Real Time Traffic Conditions
- ✓ Traffic Incident Management
- ✓ Improved Traffic Congestion
- ✓ Transit Improvement
- ✓ Pedestrian and Bicycle Accommodation/Safety
- ✓ Traffic Surveillance

The project area is located on Main Street in Downtown Worcester. BETA's work consisted of designing a traffic control operational center by integrating multiple closed loop systems into the existing and outdated traffic control center. The system consists of 11 signal locations with future add on for more intersections. The remote traffic control operational center has the ability to provide real time traffic information to the City's engineering department as well as remote locations outside of Worcester. The command center was integrated with 50" flat screen monitors capturing live traffic conditions as well as traffic surveillance.

The project included the upgrade of local signal equipment with new controllers, traffic software, detection system, communication equipment (video encoders), Ethernet, fiber optic patch panels, distribution amplifiers, wireless communication, and fiber optic network. Video detection systems provide three consolidated functions: vehicle local and system detections, traffic surveillance, and live traffic monitoring. The improvements also upgraded the existing closed loop system with the latest traffic signal control equipped with Intelligent Transportation System (ITS) capability such as Adaptive Traffic Signal Control and Peer to Peer system operation. This provided an adaptive signal timing control operation based on real time, on-demand traffic conditions.

The system is also designed to have a fail-safe feature in the event of a communication, adaptive processor, or detector failure. If a failure is detected, the system issues an alarm to user specified recipients and automatically reverts or will be set by the system to time-of-day traffic plans stored on each of the local controllers, in real time, without operator intervention and without causing disruptions to traffic flow. It also interfaces with the operation of the pedestrian signal phasing, emergency vehicle pre-exemption, flashing yellow arrow, and transit signal priority systems coupling with the existing Automatic Vehicle Locator (AVL) in the transit vehicles for overall traffic operational management. The systems comply with the requirements established in the FHWA's Model System Engineering Document for Adaptive Signal Control Technology (ASCT). The system's engineering evaluation consisted of evaluating the following ASCT traffic operating software:

- SynchroGreen by TrafficWave
- InSync by Rhythm Engineering
- Siemens SCOOTS Adaptive System

BETA

Union Avenue Area Utility Improvements

Framingham, Massachusetts

REFERENCE

William Sedewitz, PE
Chief Engineer
City of Framingham
150 Concord Street
Framingham, MA 01702
508.532.5600

Glen Calla
Project Manager
City of Framingham
110 Western Avenue
Framingham, MA 01702
508.532.6025

SERVICES PROVIDED

- Planning
- Design
- Construction Management
- Construction Inspection
- Funding Assistance

PROJECT STATUS

Start Date: October 2014
End Date: Ongoing

PROJECT COST

Total Construction Cost	$5.7M
Firm Fee	$3.3M

PROJECT BENEFITS

- Improved water quality and system capacity for fire suppression
- Improved redundancy within the water distribution system
- Improved stormwater treatment in compliance with requirements outlined in the 2014 Draft Small MS4 General Permit

BETA was hired to provide planning, design, and construction services for this major infrastructure improvements project. The overall project scope included:

- Replacement of approximately 4,000 LF of 4”-12” cast iron water main with new 8”-12” cement-lined ductile iron water main, services, and appurtenances
- Replacement/rehabilitation of approximately 3,200 LF of vitrified clay (VC) sewer main, services, and appurtenances
- Replacement of approximately 4,200 LF of VC and corrugated metal pipe (CMP) storm drain main
- Installation of two stormwater water quality units to treat stormwater runoff prior to discharge to local waterways

The infrastructure improvements project is the first of three separate contracts constructed as a precursor to a future roadway reclamation and streetscape project, which is also designed by BETA. The entire utility project is scheduled to be completed in two separate contracts (two design contracts and two construction contracts). The majority of the project area is located in a roadway that contains 8”-12” reinforced concrete road base, a remnant from the late 19th century when trolleys utilized the corridor. The entire concrete road base is scheduled to be removed as part of the utility improvements project. Additionally, asbestos cement (AC) sewer services were encountered during construction. All AC pipe encountered was properly handled, documented, removed, and disposed in accordance with MassDEP’s “Asbestos Cement Pipe Guidance Document, date June 2011, ammended May 2015, and applicable state regulations.

Union Avenue is one of the most heavily travelled roadways in City. It connects Downtown Framingham to Route 9 and the Mass Pike. An extensive traffic management program was designed to minimize impacts to drivers to the greatest extent possible.

BETA coordinated with the City of Framingham to develop and implement an extensive public outreach and education program to minimize impacts and address the diverse range of concerns of the various stakeholders.

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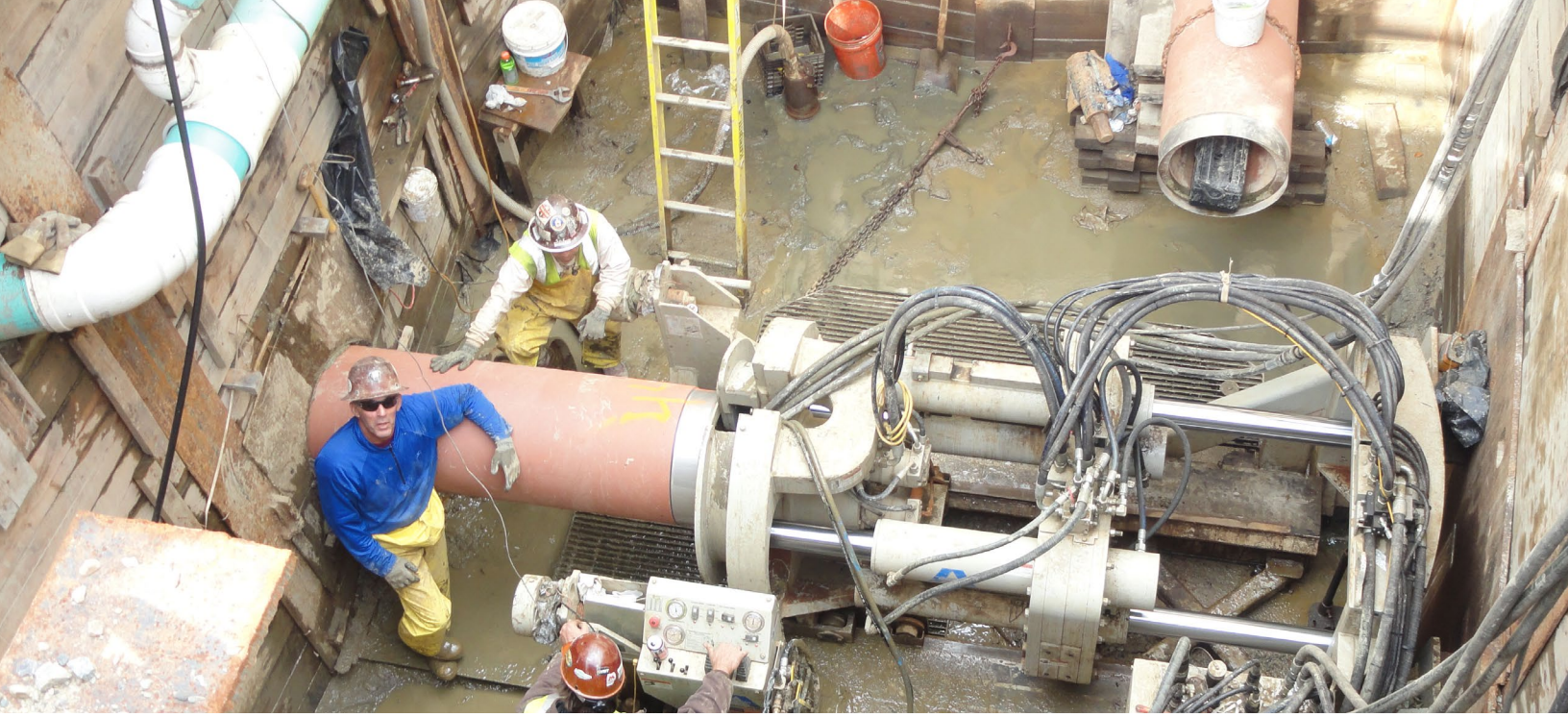

Lower Beacon Street Sewer Separation

Brookline, Massachusetts

REFERENCE
Erin Gallentine
Commissioner of Public Works
Town of Brookline
333 Washington Street
Brookline, MA 02445
617.730.2166

SERVICES PROVIDED
- Planning
- Design
- Construction Management
- Construction Inspection

SERVICES PROVIDED
Phase I $1.4M
Phase II $16.6M

PROJECT STATUS
Completed

FUNDING SOURCE
Massachusetts Water Resources Authority (MWRA)

PROJECT BENEFITS
- Reduced combined sewer overflows to Charles River
- Addressed Consent Agreement provisions

This $25 million sewer separation project was completed for the Town of Brookline, MA in conjunction with the Massachusetts Water Resource Authority's (MWRA's) Long-term CSO Control Plan as mandated by the Federal District Court. The project objective was to separate a 110-year-old large diameter combined sewer system located in the highly congested, urbanized area of Beacon Street in Brookline, bordering the City of Boston. **This project was awarded Project of the Year by ACEC/MA in 2014.**

New sanitary sewer work included:
- Microtunnel installation of 4,410 feet of 18-inch, 48-inch, and 57-inch sanitary sewer, including crossing beneath a portion of an above-ground branch of the Massachusetts Bay Transportation Authority's (MBTA) mass transit system (Green Line);
- Open trench installation of 2,330 feet of 8-inch to 57-inch sanitary sewer;
- Modifications to existing regulator structre beneath Commonwealth Avenue in Boston;
- Six cast-in-place diversion structures;
- Sanitary connection to existing 108-inch MWRA Charles River Relief Sewer Tunnel;
- Two sanitary connections to the existing 66-inch Charles River Valley Low Level Sewer;
- Rehabilitation of 1,340 linear feet of combined sewer via CIP lining for conversion to a sanitary sewer.

New storm drainage work included:
- 11,660 feet of 12-inch to 42-inch storm drains;
- Conversion of 4,450 feet of large diameter combined sewer to a dedicated storm drain. Size ranged from 84x89-inch to 40x60-inch.
- Conversion of existing CSO outfall to the Charles River to an active stormwater discharge.

BETA

New Hampshire
Rhode Island
Massachusetts
Connecticut

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